



## Agricultural Policy Developments and EU Approximation Process in the Western Balkans Countries (APDAP-WB)

### Kick-Off Meeting

14 -15th. Dec. 2017  
Skopje, Macedonia

# Measurement of support to agriculture – the methodology used in project

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# Motivation

- **The measurement of support to agriculture one of the key issues for policy analysts.**
  - The WB AgEcon group has been until now dealing mostly with budgetary transfers to agriculture.
  - This is giving a comprehensive, but not the whole picture about the total support to agriculture
- **The PSE/CSE OECD methodology is a standard tool for measurement of support to agriculture**
  - APM methodology enables to calculate also budgetary part of PSE (Producer Support Estimate)
  - The challenge is to:
    - calculate the market price support
    - ... and to develop adopted methodology.

# Content

## A. Measurement of support to agriculture: **PSE/CSE methodology**

- Concept
- Some results

## B. Total support to agriculture (PSE like concept)

- Concept (and difference to PSE)
- Deliverables

## C. Working plan for APDAB-WB project



## Agricultural Policy Developments and EU Approximation Process in the Western Balkans Countries (APDAP-WB)

# A. OECD PSE/CSE METHODOLOGY

PRESENTATION BASED ON VÁCLAV VOJTĚCH (OECD) PRESENTATION  
(27.3.2017)- PRAGUE UNIVERSITY OF ECONOMICS

# Estimation of Support to Agriculture

- **A method developed by the OECD secretariat and approved by member countries – Producer Support Estimate (PSE).**
  - Various nominal and relative indicators use in the analysis of development of agricultural policies.
    - Relative indicators enable comparability across countries and in time.
    - Detailed information on the results and the methodology used to estimate support is available on the public website [www.oecd.org/agriculture/PSE](http://www.oecd.org/agriculture/PSE) .
  - Focused on OECD countries.
    - EU covered in the report as a single entity (but detailed information on member countries).
- **Extension of country coverage**
  - 1990s focus extended to countries from CEEC (future EU members) + Russia and Ukraine).
  - 2000s – Going global (Brazil, India, China, South Africa).
  - 2010s – More global players added (Indonesia, Kazakhstan, Colombia,...).

# How OECD measures support to agriculture

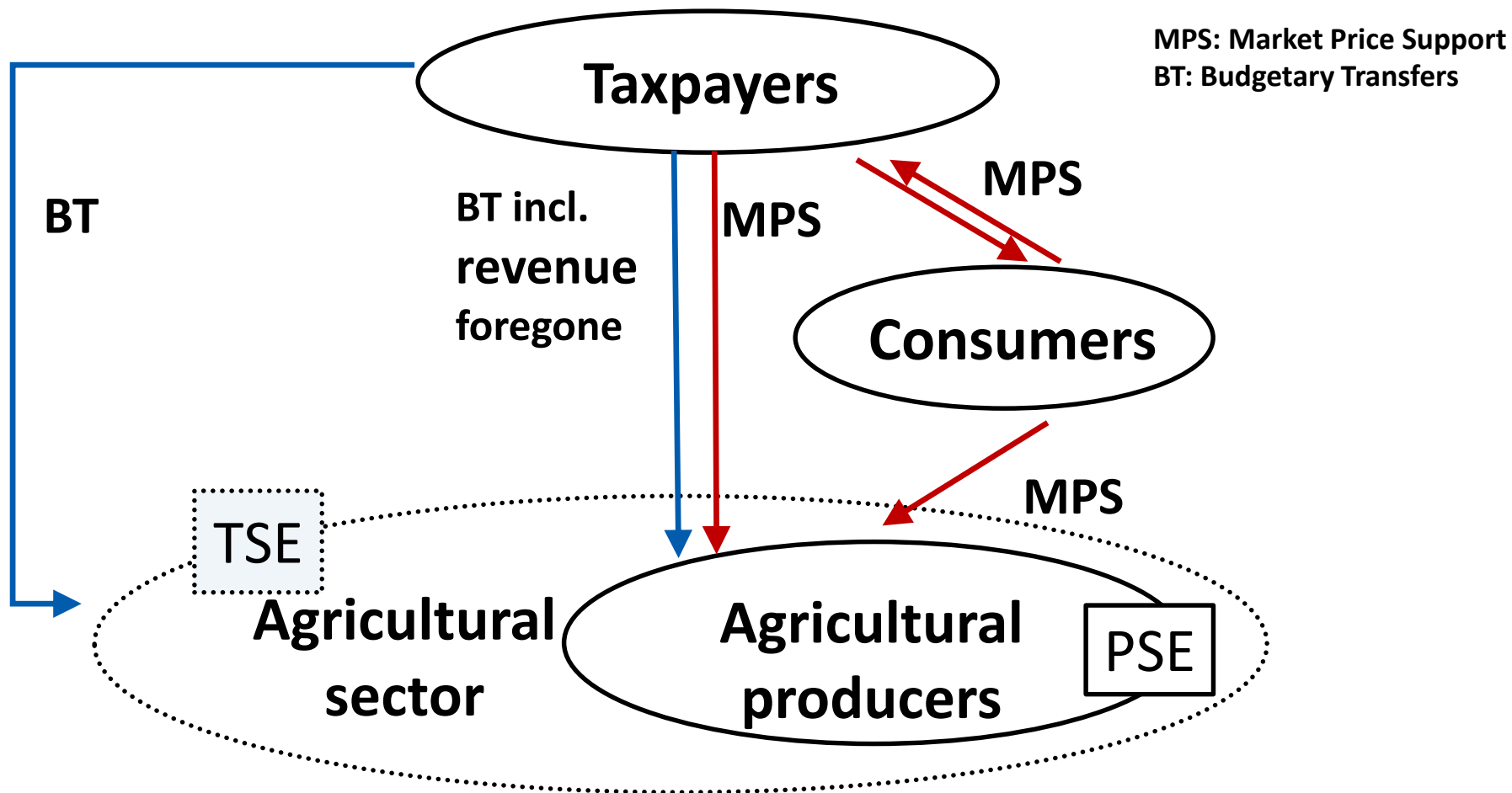
- **Components of the support**

- **Direct budgetary payments** (transfers from taxpayers to agricultural producers);
- **Market price support** (Transfers from consumers to agricultural producers – opportunity cost to consumers).

- **What policies are considered in the calculations?**

- only those policies that are **specific to agriculture**; general policies not considered;
- policy objectives are not considered;
- policy implementation criteria determines the classification of policies in pre-define categories.

Vojtěch (2017)

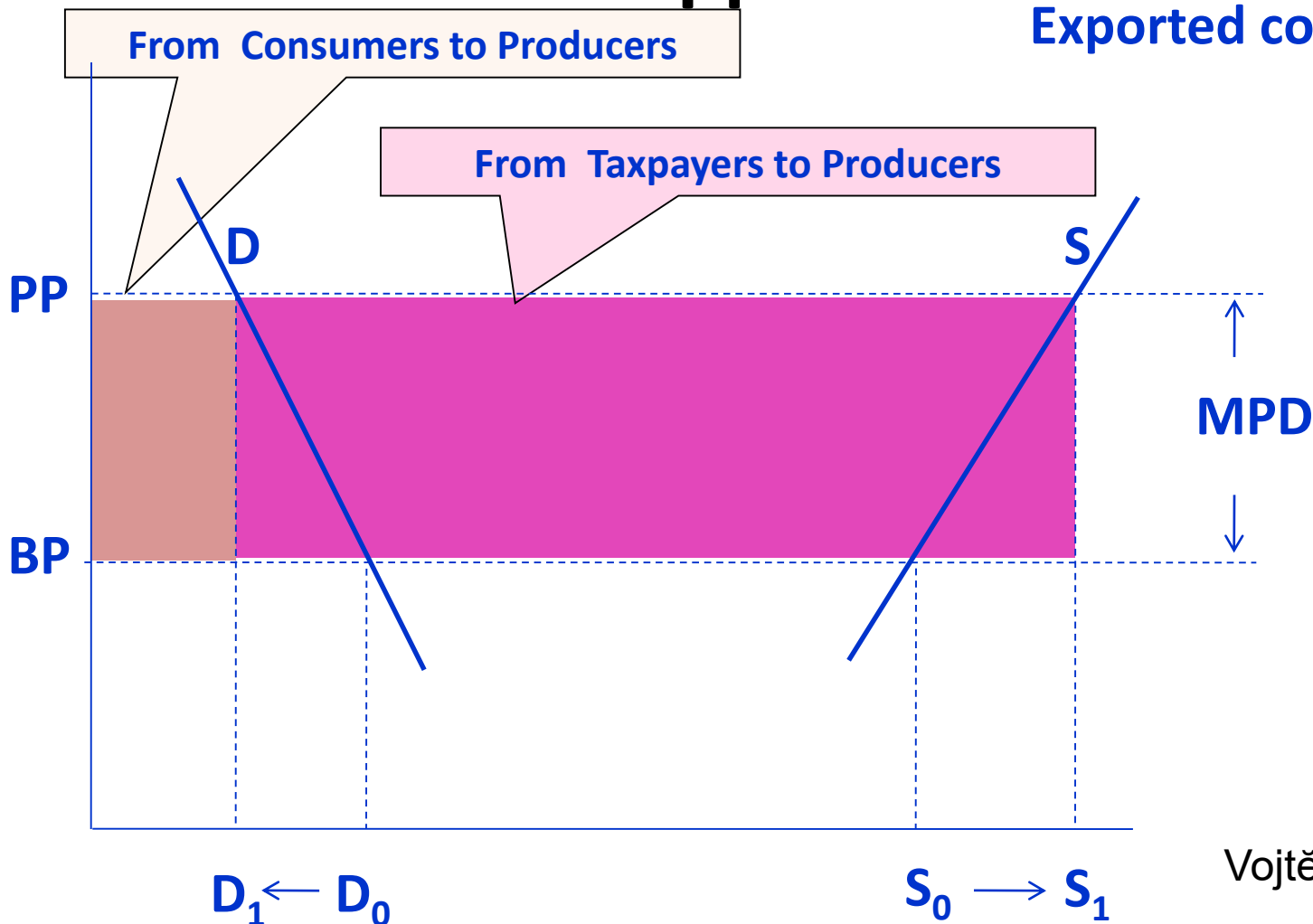


## Measuring support to agriculture: Building blocks

Vojtěch (2017)

# Market Price Support – the concept

Exported commodity



Vojtěch (2017)

PP: producer price

BP: Border price MPD: market price differential



# Key support indicators – nominal values

## Producer Support Estimate (PSE):

Vojtěch (2017)

- transfers from consumers and taxpayers to producers;

$PSE = \text{Market Price Support} + \text{Budgetary payments} + \text{Budgetary revenue foregone}$

## Market Price Support (MPS):

- transfers from (primary) consumers to agricultural producers:

$MPS = \text{Quantity of domestic production} * \text{Price gap (domestic – world pr.)}$

## Consumer Support Estimate (CSE):

- transfers from (to) consumers:

$CSE = (\text{Quantity of domestic consumption} * \text{price gap}) + \text{consumer subsidies};$

## General Services Support Estimate (GSSE):

- budgetary transfers to general services for the farming sector;

## Total support Estimate (TSE):

- transfers to agriculture

$TSE = PSE + GSSE + \text{consumer subsidies (transfers from taxpayers).}$

# Relative indicators

## Percentage PSE (%PSE):

- Transfers to individual producers as a share of gross farm receipts;

## Percentage CSE (%CSE):

- Transfers to (from) consumers as a share of consumption expenditure;

## Nominal Protection Coefficient (NPC):

- ratio between producer price and border (world) price;

## Nominal Assistance Coefficient (NAC):

- ratio between gross farm receipts incl. support and gross farm receipts valued at border prices (without any support);

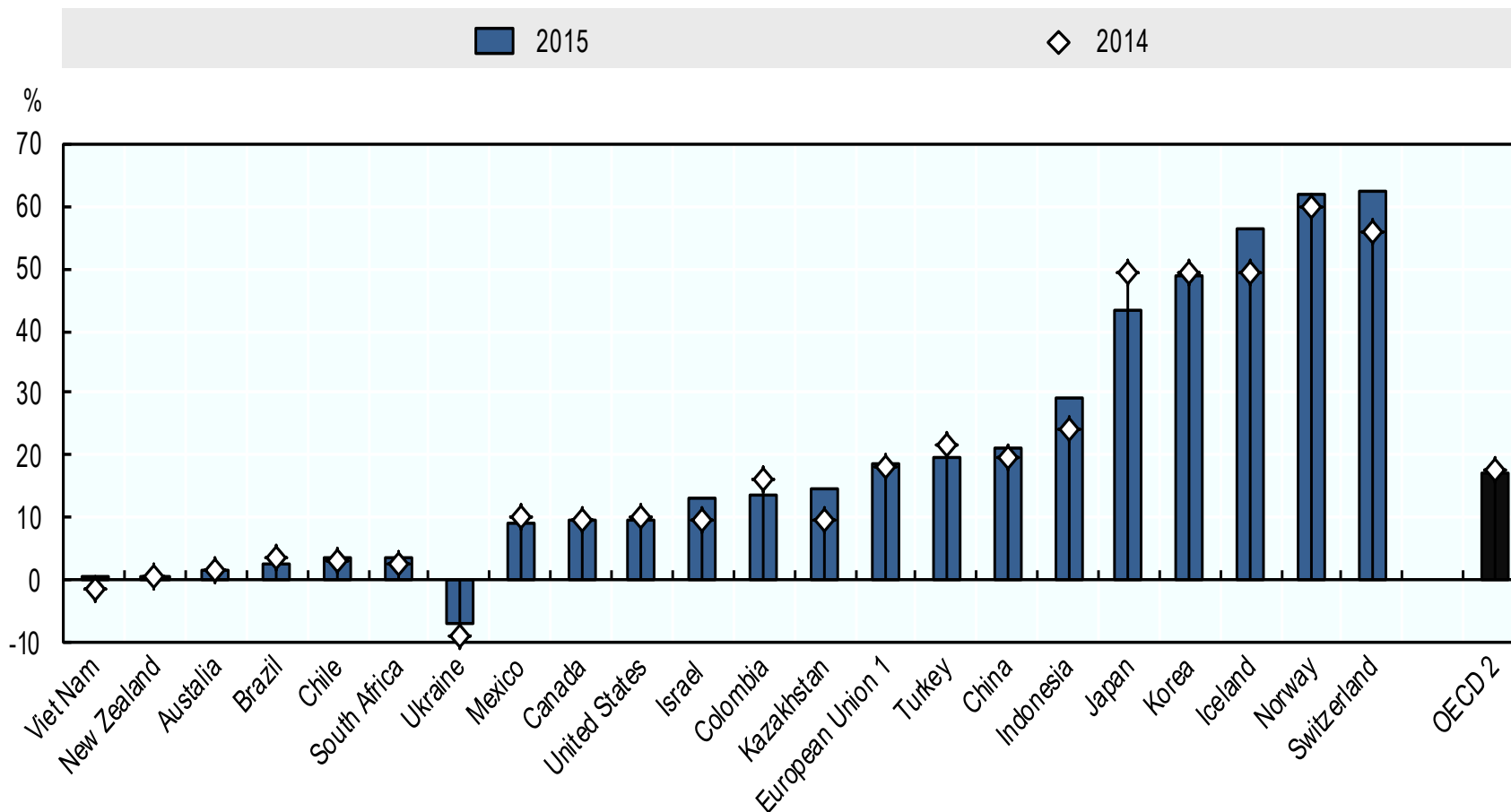
## Percentage GSSE (%GSSE):

- Nominal GSSE as a share of Total Support Estimate;

## Percentage TSE (%TSE):

- Nominal TSE as a share of GDP.

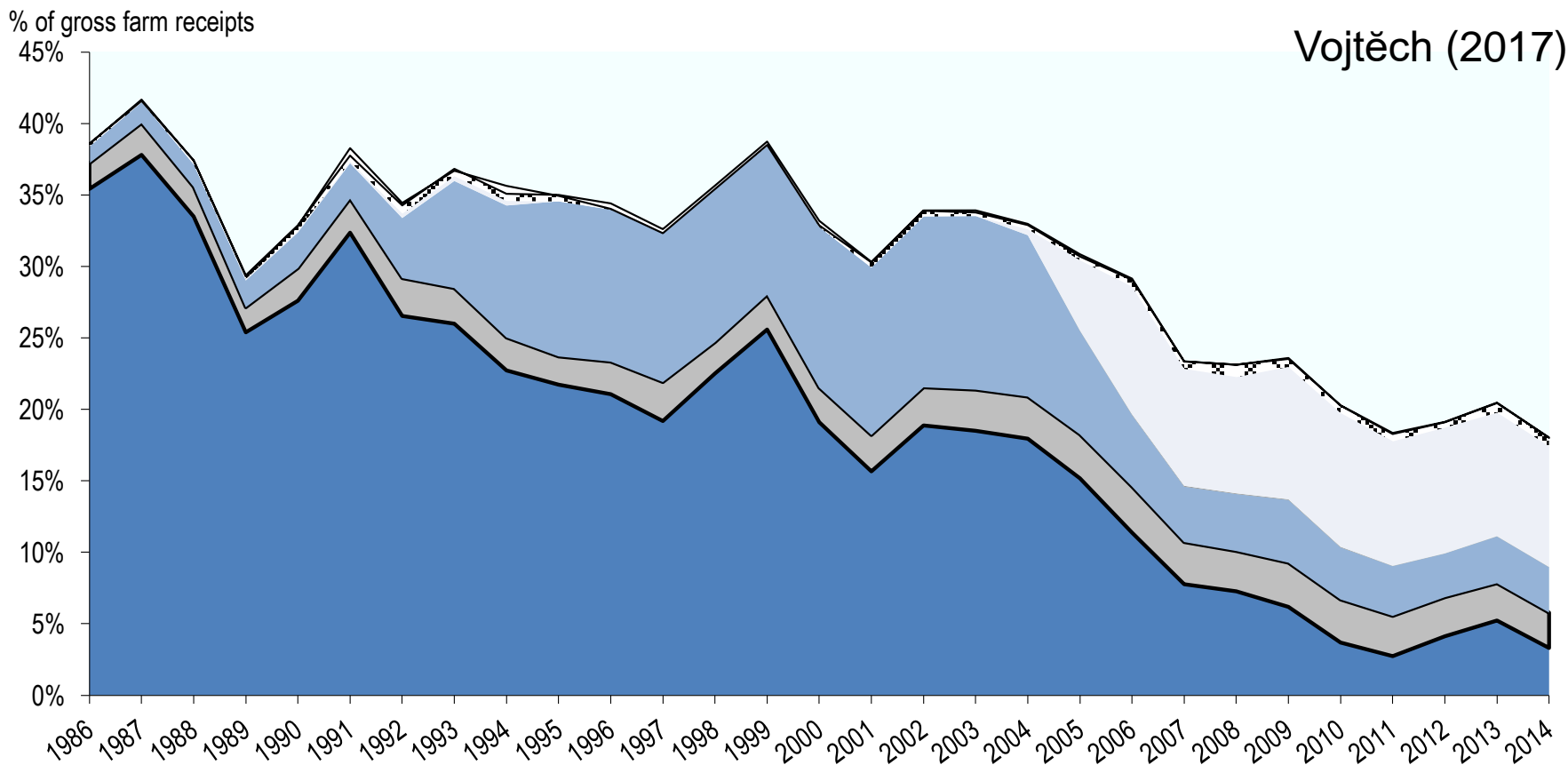
# OECD average hides large variations of support among countries



## European Union: Level and structure of support

Support based on:

- Commodity output
- Current A/An/R/I, production required 1
- Non-current A/An/R/I, production not required
- Miscellaneous
- Input use
- Non-current A/An/R/I, production required
- Non-commodity criteria





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# **B. TOTAL SUPPORT TO AGRICULTURE**

**(TTP)**

(PSE LIKE CONCEPT, DEVELOPED BY M.REDNAK ET ALL)

# Why to use TTP approach?

- **Data quality**
  - weaker availability and quality in WB than in OECD countries
- **Intellectual property**
  - PSE/CSE method is a trade mark of OECD, practically not used by other researchers
  - the Slovenian AgEcon research group developed own approach accepted in the EU horizon project and published in research paper
- **Objectives**
  - to test the method in combination with APM methodology in one of the WB countries
  - BH selected (Faculty for agriculture, Sarajevo agreed)

### NOTES TO METHODOLOGY

## **%NPR = Nominal Protection Rate**

Quantitative assessment of price protection

$$\%NPR_i = \frac{PP_i}{RP_i} * 100 - 100$$

$$\%NPR_c = \frac{\sum PP_i * QP_i}{\sum RP_i * QP_i} * 100 - 100$$

where

i = individual commodity

c = country aggregate

PP = Producer price

RP = Reference price

QP = Quantity of Production.

# NOTES TO METHODOLOGY

**TTP** *Total transfers to producers in % of the total value of agricultural production (%TTP)*

$$\%TTP_c = \%MPD_c + \%PSE BOT_c$$

Where

$$\%MPD_c = \frac{\sum MPD_i}{\sum VP_i}$$

$$MPD_i = PP_i - RP_i$$

$$\%PSE BOT_c = \frac{\sum PSE BOT_j}{VP_c}$$

c = country aggregate

i = individual commodity for commodities for which %NPRs has been calculated

MPD = market price differential; PP = producer price, RP = reference price

j = individual PSE or GSSE category; PSE BOT = budgetary and other transfers to producers

VP = value of Production (agricultural output)

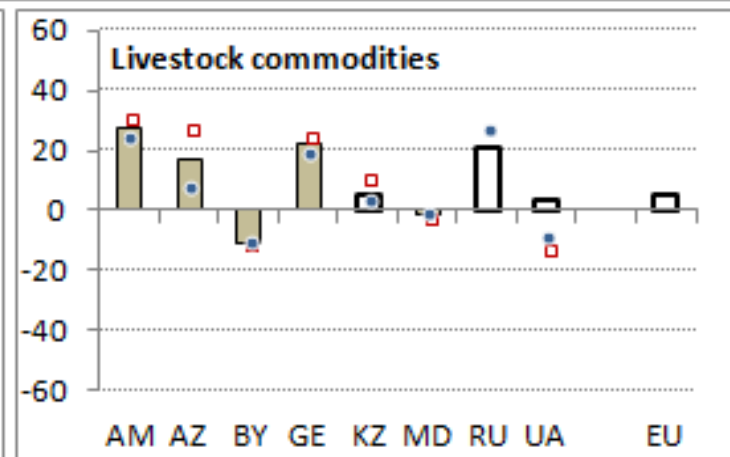
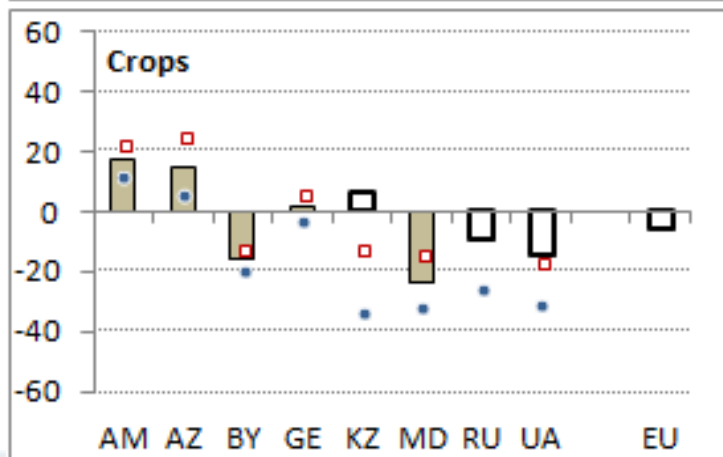
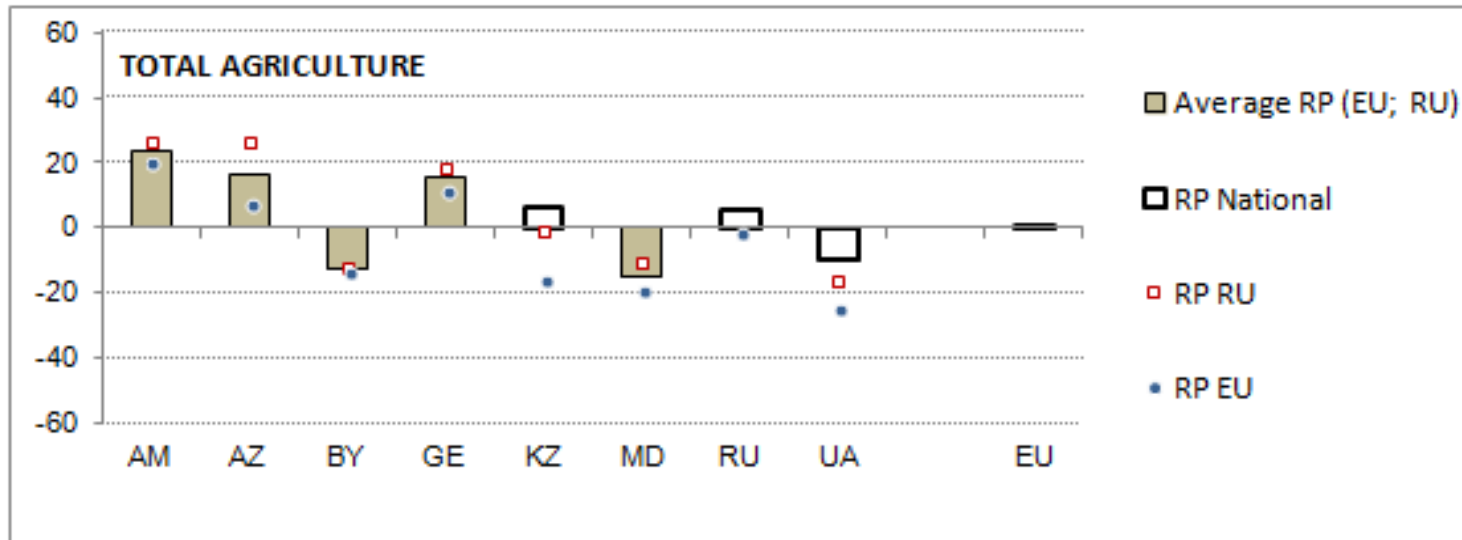


## Comparison of PSE and TTP methodology

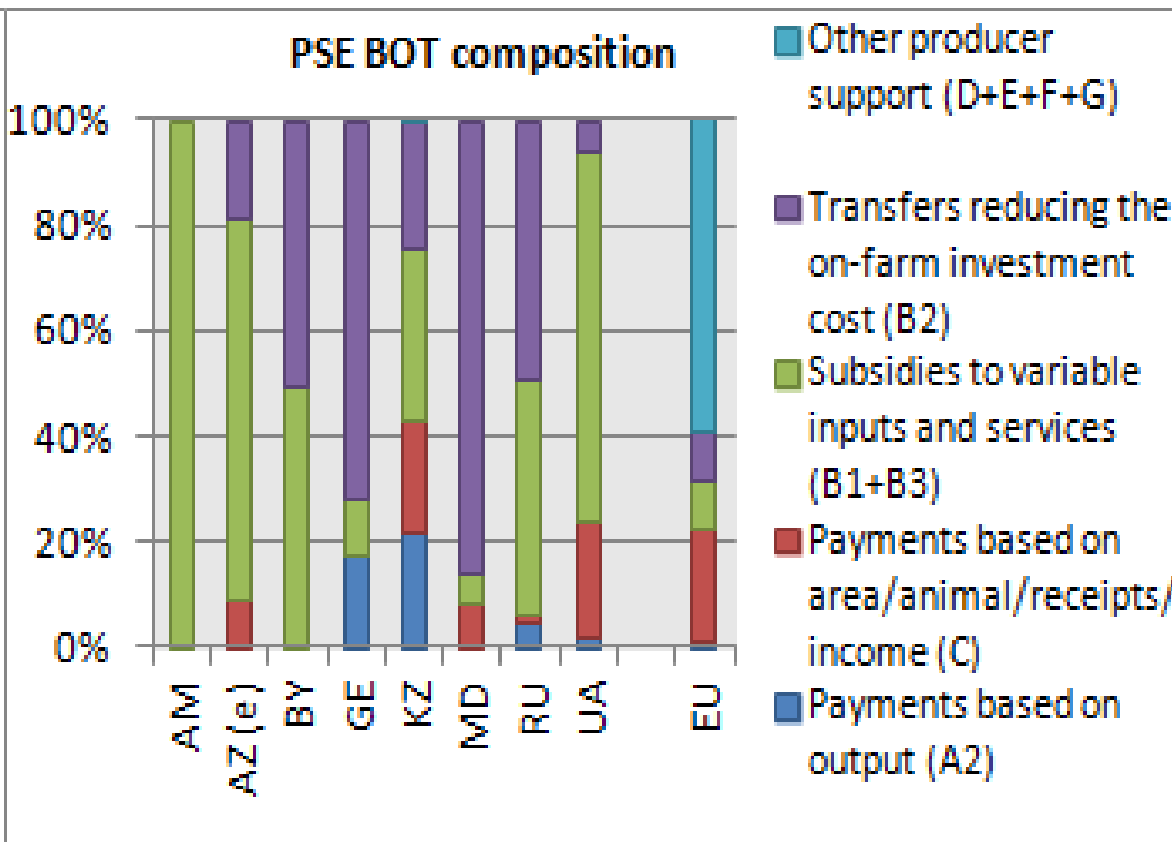
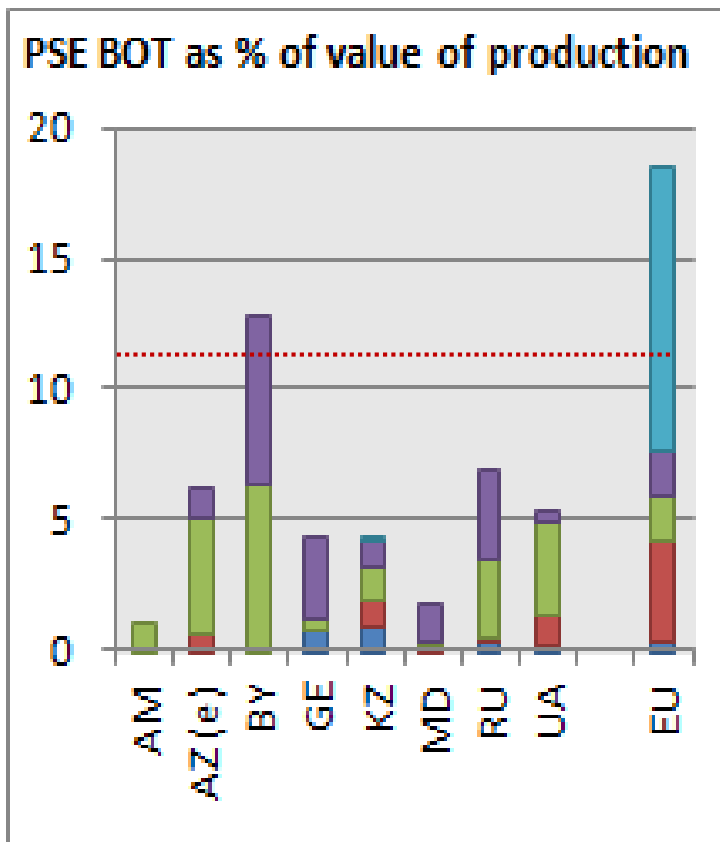
<b>Percentage Producer Support Estimate (%PSE)</b>	<b>Total transfers to producers in % of the total value of agricultural production (%TTP)</b>
<p>Where</p> $\%PSE_c = \frac{PSE_c}{GFR_c} * 100$ $PSE_c = MPS_c + BOT_c$ $GFR_c = VP_c + BOT_c$ $MPS_c = \sum (MPD_i * QP_i - LV_i - EFC_i)$ <p>GFR<sub>c</sub> = gross farm receipts of country c            VP<sub>c</sub> = total value of production of country c            BOT<sub>c</sub> = budgetary and other transfers to producers            MPD = market price differential of commodity i            QP<sub>i</sub> = quantity produced of commodity i            LV<sub>i</sub> = price Levies for commodity i            EFC<sub>i</sub> = excess feed cost for commodity i (livestock commodities only)</p>	$\%TTP_c = \%MPD_c + \%PSE BOT_c$ <p>Where</p> $\%MPD_c = \frac{\sum MPD_i}{\sum VP_i}$ $MPD_i = PP_i - RP_i$ $\%PSE BOT_c = \frac{\sum PSE BOT_j}{VP_c}$ <p>c = country aggregate            i = individual commodity for commodities for which %NPRs has been calculated            MPD = market price differential            PP = producer price            RP = reference price            j = individual PSE or GSSE category            PSE BOT = budgetary and other transfers to producers            VP = value of Production (agricultural output)</p>

# PRICE SUPPORT – %NPR

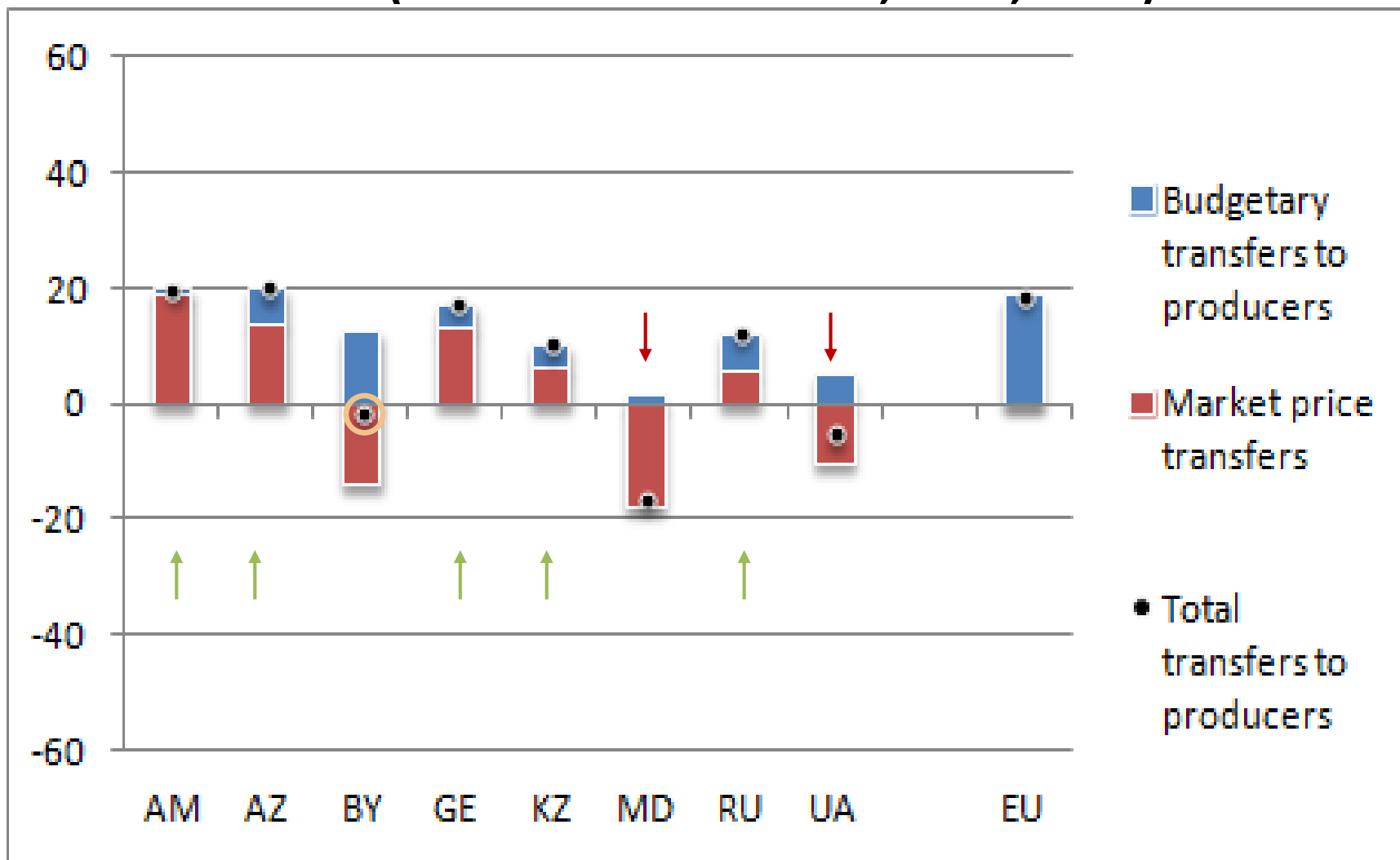
**CASE:** selected CIS countries (2011-12)



# BUDGETARY TRANSFERS to producers (PSE BOT) by categories



## % TTP (Selected CIS countries, 2011, 2012)



Data issues!



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# C. WORKING PLAN

# Tasks for BH partner (support by Slovenian team)

- **Data preparation and calculation of indicators:**
  - calculation of value of production
  - preparation of domestic and reference prices
  - calculation of indicators
- **Upgrading of APM approach**
  - including the additional indicators
  - presentation of results
- **Short comments in the country report for BH**